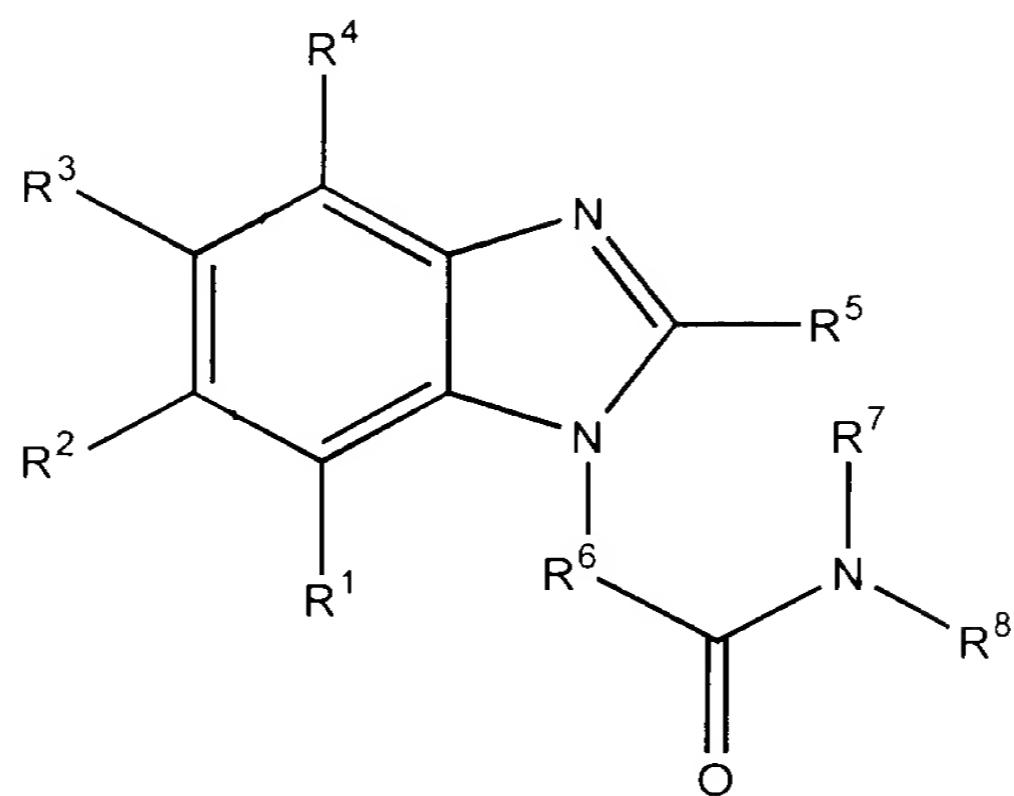


WE CLAIM:

1. A combinatorial library of two or more compounds of the formula:



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5 wherein:

R¹, R², R³ and R⁴ are, independently, selected from the group consisting of a hydrogen atom, halo, hydroxy, protected hydroxy, cyano, C₁ to C₁₀ alkyl, C₂ to C₁₀ alkenyl, C₂ to C₁₀ alkynyl, C₂ to C₁₀ substituted alkyl, C₂ to C₁₀ substituted alkenyl, C₂ to C₁₀ substituted alkynyl, C₂ to C₁₀ alkoxy, C₂ to C₁₀ substituted alkoxy, C₂ to C₁₀ acyloxy, C₂ to C₁₀ acyl, C₂ to C₁₀ cycloalkyl, C₂ to C₁₀ substituted cycloalkyl, C₂ to C₁₀ cycloalkenyl, C₂ to C₁₀ substituted cycloalkenyl, heterocyclic ring, substituted 10 heterocyclic ring, C₂ to C₁₀ phenylalkyl, C₂ to C₁₀ substituted phenylalkyl, C₂ to C₁₀ heterocycloalkyl, C₂ to C₁₀ substituted heterocycloalkyl, phenyl, substituted phenyl, naphthyl, substituted naphthyl, cyclic C₂ to C₁₀ alkylene, substituted cyclic C₂ to C₁₀ alkylene, cyclic C₂ to C₁₀

to C heteroalkylene, substituted cyclic C to C heteroalkylene, carboxy, protected carboxy, hydroxymethyl, protected hydroxymethyl, protected amino, (monosubstituted) amino, protected (monosubstituted) amino,

5 (disubstituted) amino, C to C alkylamino, C to C substituted alkylamino, carboxamide, protected carboxamide, C to C alkylthio, C to C substituted alkylthio, C to C alkylsulfonyl, C to C substituted alkylsulfonyl, C to C alkylsulfoxide, C to C substituted alkylsulfoxide, phenylthio, substituted phenylthio, phenylsulfoxide, substituted phenylsulfoxide, phenylsulfonyl, substituted phenylsulfonyl and the group consisting of (i) the formula $-C(O)NR^{\oplus}R^{\ominus}$, (ii) the formula $-C(O)R^{\oplus}$, (iii) the formula $-NR^{\oplus}R^{\ominus}$, (iv) the

10 formula $-SR^{\oplus}$, (v) the formula $-OR^{\oplus}$ and (vi) the formula $-C(O)OR^{\oplus}$, wherein R^{\oplus} and R^{\ominus} are, independently, selected from the group consisting of a hydrogen atom, C to C alkyl, C to C substituted alkyl, C to C alkenyl, C to C substituted alkenyl, phenyl, substituted phenyl,

15 naphthyl, substituted naphthyl, C to C phenylalkyl, C to C substituted phenylalkyl, C to C heterocycloalkyl, C to C substituted heterocycloalkyl, heteroaryl, substituted heteroaryl, heterocycle, substituted heterocycle, phenylsulfonyl, substituted phenylsulfonyl,

20 C to C alkylsulfonyl, C to C substituted alkylsulfonyl, C to C alkylaminocarbonyl, C to C substituted alkylaminocarbonyl, phenylaminocarbonyl, and substituted phenylaminocarbonyl;

R is selected from the group consisting of a hydrogen atom, C to C alkyl, C to C substituted alkyl, phenyl, substituted phenyl, C to C phenylalkyl, C to C substituted phenylalkyl, C to C heterocycloalkyl, C to C substituted heterocycloalkyl, carboxy, protected

carboxy, cyano, protected (monosubstituted) amino, (disubstituted) amino, C₁ to C₄ acyl, C₁ to C₄ substituted acyl, C₁ to C₄ alkoxy carbonyl, C₁ to C₄ substituted alkoxy carbonyl, heterocycle, substituted heterocycle, 5 naphthyl, substituted naphthyl, C₁ to C₄ cycloalkyl, C₁ to C₄ substituted cycloalkyl, C₁ to C₄ cycloalkenyl and C₁ to C₄ substituted cycloalkenyl;

R⁵ is the formula:

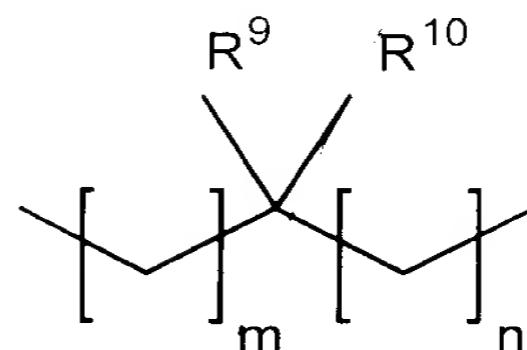
-D-W-E-

10 wherein:

15 W is absent or selected from the group consisting of phenylene, substituted phenylene, C₁ to C₄ cycloalkylene, C₁ to C₄ substituted cycloalkylene, C₁ to C₄ cycloalkenylene, C₁ to C₄ substituted cycloalkenylene, arylene, substituted arylene, heterocyclene, substituted heterocyclene, heteroarylene and substituted heteroarylene;

20 and D, which is directly attached to the nitrogen depicted in the formula, and E, which can be absent, are, independently, selected from the group consisting of C₁ to C₄ alkylene, C₁ to C₄ alkenylene, C₁ to C₄ alkynylene, C₁ to C₄ substituted alkylene, C₁ to C₄ substituted alkenylene, C₁ to C₄ substituted alkynylene, C₁ to C₄ cycloalkylene, C₁ to C₄ substituted cycloalkylene, C₁ to C₄ cycloalkenylene, C₁ to C₄ substituted cycloalkenylene, C₁ to C₄ phenylalkylene, C₁ to C₄ substituted

phenylalkylene, C₁ to C₁₀ heterocycloalkylene and C₁ to C₁₀ substituted heterocycloalkylene, -NH- and the formula:



5 wherein R⁹ and R¹⁰ are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₁₀ alkyl, C₁ to C₁₀ alkenyl, C₁ to C₁₀ alkynyl, C₁ to C₁₀ substituted alkyl, C₁ to C₁₀ substituted alkenyl, C₁ to C₁₀ substituted alkynyl, C₁ to C₁₀ acyl, C₁ to C₁₀ substituted acyl, C₁ to C₁₀ cycloalkyl, C₁ to C₁₀ substituted cycloalkyl, C₁ to C₁₀ cycloalkenyl, C₁ to C₁₀ substituted cycloalkenyl, a heterocyclic ring, substituted heterocyclic ring, heteroaryl, substituted heteroaryl, C₁ to C₁₀ phenylalkyl, C₁ to C₁₀ substituted phenylalkyl, C₁ to C₁₀ heterocycloalkyl, C₁ to C₁₀ substituted heterocycloalkyl, C₁ to C₁₀ phenylalkoxy, C₁ to C₁₀ substituted phenylalkoxy, phenyl, substituted phenyl, naphthyl, substituted naphthyl, cyclic C₁ to C₁₀ alkylene, substituted cyclic C₁ to C₁₀ alkylene, cyclic C₁ to C₁₀ heteroalkylene, substituted cyclic C₁ to C₁₀ heteroalkylene, carboxy, protected carboxy, hydroxymethyl and protected hydroxymethyl; and

10 m and n are, independently, 0, 1, 2, 3 or 4;

15 and

20

25

R and R' are, independently, selected from the group consisting of a functionalized resin, a hydrogen atom, C₁ to C₆ alkyl, C₁ to C₆ substituted alkyl, phenyl, substituted phenyl, heterocycle, substituted heterocycle, 5 C₁ to C₆ cycloalkyl, C₁ to C₆ substituted cycloalkyl, C₁ to C₆ cycloalkenyl, C₁ to C₆ substituted cycloalkenyl, C₁ to C₆ alkenyl, C₁ to C₆ substituted alkenyl, C₁ to C₆ phenylalkyl, C₁ to C₆ substituted phenylalkyl, C₁ to C₆ heterocycloalkyl and C₁ to C₆ substituted 10 heterocycloalkyl, C₁ to C₆ acyl, C₁ to C₆ substituted acyl, phenylsulfonyl, substituted phenylsulfonyl, C₁ to C₆ alkylsulfonyl, C₁ to C₆ substituted alkylsulfonyl, C₁ to C₆ alkylaminocarbonyl, C₁ to C₆ substituted alkylaminocarbonyl, phenylaminocarbonyl, substituted 15 phenylaminocarbonyl, C₁ to C₆ alkylaminothiocarbonyl, C₁ to C₆ substituted alkylaminothiocarbonyl, phenylaminothiocarbonyl and substituted phenylaminothiocarbonyl;

provided that, where R' is methylene, at least one of R₁ to R₆ must be the formula -C(O)NR₁R₂; or 20

provided that, where R' is methylene, at least one of R₁ to R₆ must be the formula -C(O)R₃, wherein R₃ is a heterocyclic ring or substituted heterocyclic ring, wherein said ring contains at least one nitrogen atom and 25 wherein said nitrogen atom is attached to the carbonyl carbon; or

a pharmaceutically acceptable salt of a compound thereof.

2. The combinatorial library of claim 1, wherein:

R, R, R and R¹ are, independently, selected from the group consisting of a hydrogen atom, halo, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, carboxy, and the group consisting of (i) the formula -C(O)NR¹R² and (ii) the formula -C(O)R¹, wherein R¹ and R² are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, C₁ to C₄ alkenyl, C₁ to C₄ substituted alkenyl, C₁ to C₄ phenylalkyl, C₁ to C₄ substituted phenylalkyl, C₁ to C₄ heterocycloalkyl, C₁ to C₄ substituted heterocycloalkyl, heteroaryl, substituted heteroaryl, heterocycle and substituted heterocycle.

3. The combinatorial library of claim 1, wherein:

R, R, and R¹ are each a hydrogen atom and R² is selected from the group consisting of halo, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, carboxy, and the group consisting of (i) the formula -C(O)NR¹R² and (ii) the formula -C(O)R¹, wherein R¹ and R² are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, C₁ to C₄ alkenyl, C₁ to C₄ substituted alkenyl, C₁ to C₄ phenylalkyl, C₁ to C₄ substituted phenylalkyl, C₁ to C₄ heterocycloalkyl, C₁ to C₄ substituted heterocycloalkyl, heteroaryl, substituted heteroaryl, heterocycle and substituted heterocycle.

4. The combinatorial library of claim 1, wherein:

R is selected from the group consisting of a hydrogen atom, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, phenyl, substituted phenyl, C₁ to C₄ phenylalkyl, C₁ to C₄

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substituted phenylalkyl, C₁ to C₁₂ heterocycloalkyl, C₁ to C₁₂ substituted heterocycloalkyl, heterocycle, substituted heterocycle, C₁ to C₁₂ cycloalkyl and C₁ to C₁₂ substituted cycloalkyl.

5 5. The combinatorial library of claim 1, wherein:

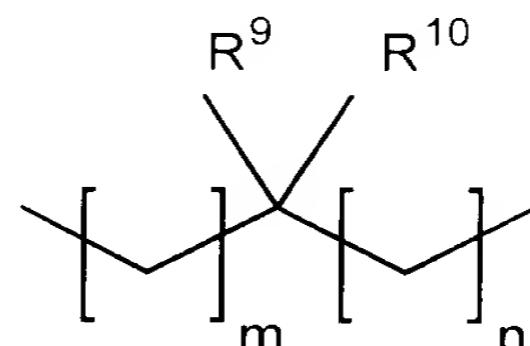
R' is the formula:

-D-W-E-

wherein:

10 W is absent or selected from the group consisting of phenylene, substituted phenylene, C₁ to C₁₂ cycloalkylene and C₁ to C₁₂ substituted cycloalkylene; and

15 D, which is directly attached to the nitrogen depicted in the formula, and E, which can be absent, are, independently, selected from the group consisting of C₁ to C₁₂ alkylene, C₁ to C₁₂ substituted alkylene, -NH- and the formula:



wherein:

20 R' and Rⁱ are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₁₂ alkyl, C₁ to C₁₂ substituted alkyl, C₁ to C₁₂ cycloalkyl, C₁ to C₁₂

substituted cycloalkyl, C₁ to C₁₀,
phenylalkyl, C₁ to C₁₀, substituted
phenylalkyl, phenyl, substituted phenyl;
and m and n are independently 0, 1 or 2.

5 6. The combinatorial library of claim 1, wherein:

R¹ and R² are, independently, selected from a
functionalized resin and a hydrogen atom.

7. The combinatorial library of claim 1, wherein:

R¹, R², R³ and R⁴ are, independently, selected from the
10 group consisting of a hydrogen atom, halo, C₁ to C₁₀,
alkyl, C₁ to C₁₀, substituted alkyl, carboxy, and the group
consisting of (i) the formula -C(O)NR¹R² and (ii) the
formula -C(O)R³, wherein R¹ and R² are, independently,
selected from the group consisting of a hydrogen atom, C₁
15 to C₁₀ alkyl, C₁ to C₁₀ substituted alkyl, C₁ to C₁₀,
alkenyl, C₁ to C₁₀, substituted alkenyl, C₁ to C₁₀,
phenylalkyl, C₁ to C₁₀, substituted phenylalkyl, C₁ to C₁₀,
heterocycloalkyl, C₁ to C₁₀, substituted heterocycloalkyl,
heteroaryl, substituted heteroaryl, heterocycle and
20 substituted heterocycle;

R³ is selected from the group consisting of a hydrogen
atom, C₁ to C₁₀ alkyl, C₁ to C₁₀ substituted alkyl, phenyl,
substituted phenyl, C₁ to C₁₀, phenylalkyl, C₁ to C₁₀,
substituted phenylalkyl, C₁ to C₁₀, heterocycloalkyl, C₁ to
25 C₁₀, substituted heterocycloalkyl, heterocycle, substituted
heterocycle, C₁ to C₁₀ cycloalkyl and C₁ to C₁₀ substituted
cycloalkyl;

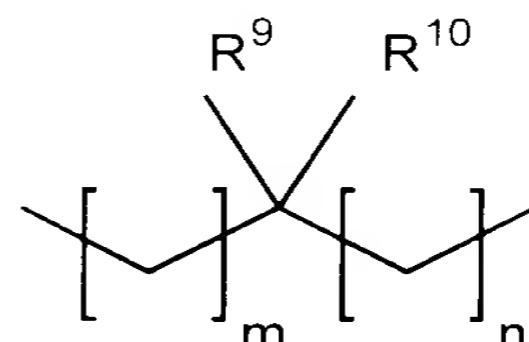
R' is the formula:

-D-W-E-

wherein:

5 W is absent or selected from the group consisting of phenylene, substituted phenylene, C₁ to C₆ cycloalkylene and C₁ to C₆ substituted cycloalkylene; and

10 D, which is directly attached to the nitrogen depicted in the formula, and E, which can be absent, are, independently, selected from the group consisting of C₁ to C₆ alkylene, C₁ to C₆ substituted alkylene, -NH- and the formula:



wherein:

15 R' and R¹ are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₆ alkyl, C₁ to C₆ substituted alkyl, C₁ to C₆ cycloalkyl, C₁ to C₆ substituted cycloalkyl, C₁ to C₆ phenylalkyl, C₁ to C₆ substituted phenylalkyl, phenyl, substituted phenyl; and m and n are, independently, 0, 1 or 2; and

R and R¹ are, independently, selected from a functionalized resin and a hydrogen atom.

8. The combinatorial library of claim 1, wherein R¹ is methylene, R², R³ and R⁴ are each a hydrogen atom and R⁵ is the formula -C(O)NR⁶R⁷.

9. The combinatorial library of claim 1, wherein R¹ is methylene, R², R³ and R⁴ are each a hydrogen atom and R⁵ is the formula -C(O)R⁸, wherein R⁸ is a heterocyclic ring or substituted heterocyclic ring, wherein said ring 10 contains at least one nitrogen atom and wherein said nitrogen atom is attached to the carbonyl carbon.

10. The combinatorial library of claim 1, wherein R⁶ is not methylene.

11. The combinatorial library of claim 1, wherein:

15 R¹, R² and R⁴ are each a hydrogen atom and R⁵ is the formula -C(O)NR¹¹R¹², wherein R¹¹ is selected from the group consisting of a hydrogen atom, methyl, ethyl and benzyl and R¹² is selected from the group consisting of a hydrogen atom, benzyl, 4-methoxyphenyl, 4-phenoxyphenyl, 20 (1-ethyl-2-pyrrolidino)methyl, pyridin-2-ylmethyl, (2-(pyridin-2-yl)ethyl, methyl, 3,3,5-trimethylcyclohexyl, cyclohexyl, 3-(trifluoromethyl)benzyl, 6-indazolyl, 2-(ethoxycarbonyl)ethyl, ethoxycarbonylmethyl, 25 cyclooctyl, cyclopropyl, (N,N-diethylamino)ethyl, 3-(2-oxo-1-pyrrolidino)propyl, (1-ethyl-2-pyrrolidinyl)methyl, pyridin-4-ylmethyl, 3-(4-morpholino)propyl, 4-methylphenyl, butyl and 2-thiazolyl;

R is selected from the group consisting of
3-phenoxyphenyl, 3-hydroxy-4-methoxyphenyl,
4-acetamidophenyl, 4-phenoxyphenyl, 4-bromo-2-thienyl,
4-pyridyl, 2-butyl, 4-chloro-3-nitrophenyl,
5 3-nitrophenyl, 2,3-dichlorophenyl, 2,5-difluorophenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
2-phenyl-4-imidazolyl, 5-nitro-2-furyl, 4-bromophenyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
10 3-hydroxyphenyl, 3,4-difluorophenyl,
4-dimethylaminophenyl, 2-thienyl, 4-cyanophenyl,
3-cyanophenyl, 4-nitrophenyl, 2-fluorophenyl,
4-carboxyphenyl, 2-bromophenyl,
2-chloro-3,4-dimethoxyphenyl, 3-thienyl, 4-quinolyl,
15 4-methyl-5-imidazolyl, 4-hydroxyphenyl,
2-ethyl-5-formyl-4-methylimidazolyl,
4-chloro-2-nitrophenyl, 3-pyridyl,
3,4-dimethyl-6-nitrophenyl, 5-chloro-2-nitrophenyl and
2-nitrophenyl;

20 R' is selected from the group consisting of methylene,
ethylidene, ethylene, propylene, pentylene,
isopentylidene, 3-aminocarbonylbutylidene,
2-methylthiopropylidene, isobutylidene, phenylmethylene,
benzylmethylen, cyclohexylethylidene,
25 4-chlorobenzylmethylen,
indol-3-ylethylidene, 4-trifluoroacetamidopentylidene,
3-guanidobutylidene, -CH CH NH- and
1,4-(cyclohexylene)-NH-;

and

30 R and R' are each a hydrogen atom.

12. The combinatorial library of claim 1, wherein:

R' , R and R^i are each a hydrogen atom and R' is the formula $-C(O)R'$, wherein R' is selected from the group consisting of

5 1,3,3-trimethyl-6-aza-6-bicyclo(3,2,1)octyl,
4-(4-fluorophenyl)-1-piperazino, 4-acetyl-1-piperazino,
morpholino, 2-methyl-4-(3-methylphenyl)-1-piperazino,
4-ethoxycarbonylpiperidino and N-methylhomopiperazino;

R is selected from the group consisting of

10 3-phenoxyphenyl, 3-hydroxy-4-methoxyphenyl,
4-acetamidophenyl, 4-phenoxyphenyl, 4-bromo-2-thienyl,
4-pyridyl, 2-butyl, 4-chloro-3-nitrophenyl,
3-nitrophenyl, 2,3-dichlorophenyl, 2,5-difluorophenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
15 2-phenyl-4-imidazolyl, 5-nitro-2-furyl, 4-bromophenyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,
4-dimethylaminophenyl, 2-thienyl, 4-cyanophenyl,
20 3-cyanophenyl, 4-nitrophenyl, 2-fluorophenyl,
4-carboxyphenyl, 2-bromophenyl,
2-chloro-3,4-dimethoxyphenyl, 3-thienyl, 4-quinolyl,
4-methyl-5-imidazolyl, 4-hydroxyphenyl,
2-ethyl-5-formyl-4-methylimidazolyl,
25 4-chloro-2-nitrophenyl, 3-pyridyl,
3,4-dimethyl-6-nitrophenyl, 5-chloro-2-nitrophenyl and
2-nitrophenyl;

R' is selected from the group consisting of methylene,
ethylidene, ethylene, propylene, pentylene,

30 isopentylidene, 3-aminocarbonylbutylidene,
2-methylthiopropylidene, isobutylidene, phenylmethylene,

benzylmethylen, cyclohexylethylidene,
4-chlorobenzylmethylen,
indol-3-ylethylidene, 4-trifluoroacetamidopentylidene,
3-guanidobutylidene, -CH₂CH₂NH- and
5 1,4-(cyclohexylene)-NH-; and

R and R¹ are each a hydrogen atom.

13. The combinatorial library of claim 1, wherein:

R, R and R¹ are each a hydrogen atom and R¹ is the
formula -C(O)NR²R³, wherein R² is selected from the group
10 consisting of a hydrogen atom, methyl, ethyl and benzyl
and R³ is selected from the group consisting of a
hydrogen atom, 2-(2-methoxyphenyl)ethyl,
(1-ethyl-2-pyrrolidinyl)methyl,
pyridin-2-ymethyl, 2-methyl-5-chlorophenyl,
15 2-(pyridin-2-yl)ethyl, 1-ethyl-2-pyrrolidinylmethyl,
3,3,5-trimethylcyclohexyl, 3,4-methylenedioxypheyl,
3-(trifluoromethyl)benzyl, pyridin-4-ylmethyl,
6-indazolyl, 2-(ethoxylcarbonyl)ethyl, cyclooctyl,
cyclopropyl, benzyl, N,N-(diethylamino)ethyl,
20 3-(2-oxo-1-pyrrolidine)propyl, 3-(4-morpholino)propyl,
(ethoxylcarbonyl)methyl and cyclohexyl;

R is selected from the group consisting of phenoxyphenyl,
4-hydroxy-3-methoxyphenyl, 3,4,5-trimethoxyphenyl,
3-hydroxy-4-methoxyphenyl, 4-acetamidophenyl,
25 4-phenoxyphenyl, 4-methoxyl-1-naphthyl,
4-bromo-2-thienyl, 4-pyridyl, isopropyl,
2-methylthioethyl, 4-chloro-3-nitrophenyl, 3-nitrophenyl,
4-t-butylphenyl, 2,3-dichlorophenyl,
3,5-bis(trifluoromethyl)phenyl, 2,5-difluorophenyl,

2-quinolyl, 2-chloro-3,4-dimethoxylphenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
2-phenyl-4-imidazolyl, 2-(ethoxycarbonyl)cyclopropyl,
5-nitro-2-furyl, 4-bromophenyl, cyclopropyl,
5 2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,
4-dimethylaminophenyl, 4-methylthiophenyl,
4-(trifluoromethyl)phenyl, 2-thienyl,
10 2,3-dimethoxyphenyl, 3-ethoxy-4-hydroxyphenyl,
4-cyanophenyl, 3-cyanophenyl, 2-furyl, 4-nitrophenyl,
1-naphthyl, 2-methoxyphenyl, 4-isopropylphenyl, piperonyl,
2-fluorophenyl, 4-ethoxyphenyl and 2,4-dihydroxyphenyl;

R¹ is selected from the group consisting of methylene,
15 ethylidene, ethylene, propylene, pentylene,
isopentylidene, 3-aminocarbonylbutylidene,
2-methylthiopropylidene, isobutylidene, phenylmethylen,
benzylmethylen, cyclohexylethylidene,
4-chlorobenzylmethylen,
20 indol-3-ylethylidene, 4-trifluoroacetamidopentylidene,
3-guanidobutylidene, hydroxyethylidene,
2-aminocarbonylpropylidene, isopentylidene,
mercaptoethylidene, 4-hydroxybenzylmethylen,
1,3-phenylene, 1,4-phenylene, 1,4-(phenylene)-NH-,
25 3,6-dioxaoctylene-NH-, -CH₂CH NH- and
1,4-(cyclohexylene)-NH-;

and

R¹ and R² are each a hydrogen atom.

14. The combinatorial library of claim 1, wherein:

R₁, R₂ and R₃ are each a hydrogen atom and R¹ is the formula -C(O)R², wherein R² is selected from the group consisting of

5 1,3,3-trimethyl-6-aza-6-bicyclo(3,2,1)octyl,
4-(4-fluorophenyl)-1-piperazino, 4-acetyl-1-piperazino,
piperazino, 2-methyl-4-(3-methylphenyl)-1-piperazino,
4-(ethoxycarbonyl)piperidino, N-methylhomopiperazino and
N,N'-diisopropylimidamino;

10 R is selected from the group consisting of phenoxyphenyl,
4-hydroxy-3-methoxyphenyl, 3,4,5-trimethoxyphenyl,
3-hydroxy-4-methoxyphenyl, 4-acetamidophenyl,
4-phenoxyphenyl, 4-methoxyl-1-naphthyl,
4-bromo-2-thienyl, 4-pyridyl, isopropyl,

15 2-methylthioethyl, 4-chloro-3-nitrophenyl, 3-nitrophenyl,
4-t-butylphenyl, 2,3-dichlorophenyl,
3,5-bis(trifluoromethyl)phenyl, 2,5-difluorophenyl,
2-quinolyl, 2-chloro-3,4-dimethoxyphenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,

20 2-phenyl-4-imidazolyl, 2-(ethoxycarbonyl)cyclopropyl,
5-nitro-2-furyl, 4-bromophenyl, cyclopropyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,

25 4-dimethylaminophenyl, 4-methylthiophenyl,
4-(trifluoromethyl)phenyl, 2-thienyl,
2,3-dimethoxyphenyl, 3-ethoxy-4-hydroxyphenyl,
4-cyanophenyl, 3-cyanophenyl, 2-furyl, 4-nitrophenyl,
1-naphthyl, 2-methoxyphenyl, 4-isopropylphenyl, piperonyl,

30 2-fluorophenyl, 4-ethoxyphenyl and 2,4-dihydroxyphenyl;

R' is selected from the group consisting of methylene, ethyldene, ethylene, propylene, pentylene, isopentylidene, 3-aminocarbonylbutylidene, 2-methylthiopropylidene, isobutylidene, phenylmethylen, 5 benzylmethylen, cyclohexylethylidene, 4-chlorobenzylmethylen, indol-3-ylethylidene, 4-trifluoroacetamidopentylidene, 3-guanidobutylidene, hydroxyethylidene, 2-aminocarbonylpropylidene, isopentylidene, 10 mercaptoethylidene, 4-hydroxybenzylmethylen, 1,3-phenylene, 1,4-phenylene, 1,4-(phenylene)-NH-, 3,6-dioxaoctylene-NH-, -CH CH NH- and 1,4-(cyclohexylene)-NH-;

and

15 R and R' are each a hydrogen atom.

15. The combinatorial library of claim 1, wherein

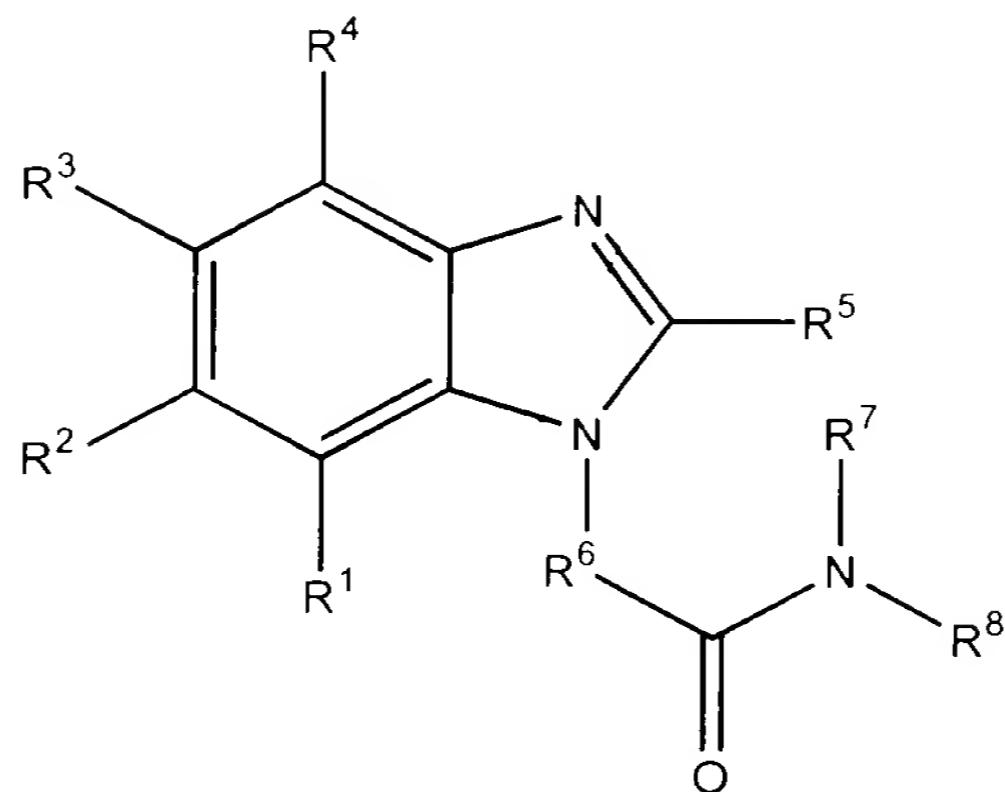
Rⁱ, R^j, R^k, R^l and R^m are each a hydrogen atom;

R' is the formula -C(O)NR¹¹R¹², wherein R¹¹ is a hydrogen atom and R¹² is selected from the group consisting of 20 pyridin-2-ylmethyl and 3,3,5-trimethylcyclohexyl;

R is selected from the group consisting of 4-N,N-dimethylaminophenyl, 5-chloro-2-nitrophenyl, 4-bromo-2-thienyl, 2-butyl, 5-nitro-2-furyl, 4-bromophenyl, 2-thienyl, 3-thienyl, 3-cyanophenyl, 25 4-cyanophenyl, 4-quinolyl and 4-hydroxyphenyl; and

R is methylene.

16. A single compound of the formula:



wherein:

R¹, R², R³ and R⁴ are, independently, selected from the
 5 group consisting of a hydrogen atom, halo, hydroxy,
 protected hydroxy, cyano, C₁ to C₁₀ alkyl, C₂ to C₁₀
 alkenyl, C₂ to C₁₀ alkynyl, C₂ to C₁₀ substituted alkyl, C₂
 to C₁₀ substituted alkenyl, C₂ to C₁₀ substituted alkynyl,
 C₂ to C₁₀ alkoxy, C₂ to C₁₀ substituted alkoxy, C₂ to C₁₀
 10 acyloxy, C₂ to C₁₀ acyl, C₂ to C₁₀ cycloalkyl, C₂ to C₁₀
 substituted cycloalkyl, C₂ to C₁₀ cycloalkenyl, C₂ to C₁₀
 substituted cycloalkenyl, heterocyclic ring, substituted
 15 heterocyclic ring, C₂ to C₁₀ phenylalkyl, C₂ to C₁₀
 substituted phenylalkyl, C₂ to C₁₀ heterocycloalkyl, C₂ to C₁₀
 C₂ to C₁₀ substituted heterocycloalkyl, phenyl, substituted
 phenyl, naphthyl, substituted naphthyl, cyclic C₂ to C₁₀
 alkylene, substituted cyclic C₂ to C₁₀ alkylene, cyclic C₂

to C heteroalkylene, substituted cyclic C to C heteroalkylene, carboxy, protected carboxy, hydroxymethyl, protected hydroxymethyl, protected amino, (monosubstituted) amino, protected (monosubstituted) amino, 5 (disubstituted) amino, C to C₁ alkylamino, C to C₁ substituted alkylamino, carboxamide, protected carboxamide, C to C₁ alkylthio, C to C₁ substituted alkylthio, C to C₁ alkylsulfonyl, C to C₁ substituted alkylsulfonyl, C to C₁ alkylsulfoxide, C to C₁ substituted alkylsulfoxide, phenylthio, substituted phenylthio, phenylsulfoxide, substituted phenylsulfoxide, phenylsulfonyl, substituted phenylsulfonyl and the group consisting of (i) the formula -C(O)NR¹¹R¹², (ii) the formula -C(O)R¹¹, (iii) the formula -NR¹¹R¹², (iv) the formula -SR¹¹, (v) the formula -OR¹¹ and (vi) the formula -C(O)OR¹¹, wherein R¹¹ and R¹² are, independently, selected from the group consisting of a hydrogen atom, C to C₁ alkyl, C to C₁ substituted alkyl, C to C₁ alkenyl, C to C₁ substituted alkenyl, phenyl, substituted phenyl, 10 naphthyl, substituted naphthyl, C to C₁ phenylalkyl, C to C₁ substituted phenylalkyl, C to C₁ heterocycloalkyl, C to C₁ substituted heterocycloalkyl, heteroaryl, substituted heteroaryl, heterocycle, substituted heterocycle, phenylsulfonyl, substituted phenylsulfonyl, 15 20 25 C to C₁ alkylsulfonyl, C to C₁ substituted alkylsulfonyl, C to C₁ alkylaminocarbonyl, C to C₁ substituted alkylaminocarbonyl, phenylaminocarbonyl and substituted phenylaminocarbonyl;

R is selected from the group consisting of a hydrogen atom, C to C₁ alkyl, C to C₁ substituted alkyl, phenyl, substituted phenyl, C to C₁ phenylalkyl, C to C₁ substituted phenylalkyl, C to C₁ heterocycloalkyl, C to C₁ substituted heterocycloalkyl, carboxy, protected 30

carboxy, cyano, protected (monosubstituted) amino, (disubstituted) amino, C₁ to C₄ acyl, C₁ to C₄ substituted acyl, C₁ to C₄ alkoxy carbonyl, C₁ to C₄ substituted alkoxy carbonyl, heterocycle, substituted heterocycle, 5 naphthyl, substituted naphthyl, C₁ to C₄ cycloalkyl, C₁ to C₄ substituted cycloalkyl, C₁ to C₄ cycloalkenyl and C₁ to C₄ substituted cycloalkenyl;

R' is the formula:

-D-W-E-

10

wherein:

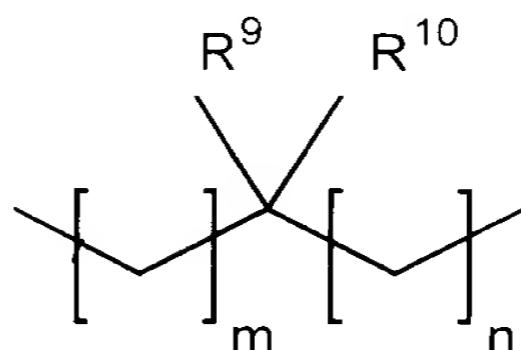
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W is absent or selected from the group consisting of phenylene, substituted phenylene, C₁ to C₄ cycloalkylene, C₁ to C₄ substituted cycloalkylene, C₁ to C₄ cycloalkenylene, C₁ to C₄ substituted cycloalkenylene, arylene, substituted arylene, heterocyclene, substituted heterocyclene, heteroarylene and substituted heteroarylene;

20

and D, which is directly attached to the nitrogen depicted in the formula, and E, which can be absent, are independently selected from the group consisting of C₁ to C₄ alkylene, C₁ to C₄ alkenylene, C₁ to C₄ alkynylene, C₁ to C₄ substituted alkylene, C₁ to C₄ substituted alkenylene, C₁ to C₄ substituted alkynylene, C₁ to C₄ cycloalkylene, C₁ to C₄ substituted cycloalkylene, C₁ to C₄ cycloalkenylene, C₁ to C₄ substituted cycloalkenylene, C₁ to C₄ phenylalkylene, C₁ to C₄ substituted

phenylalkylene, C to C heterocycloalkylene and C to C substituted heterocycloalkylene, -NH- and the formula:



5 wherein R' and R¹⁰ are, independently, selected from the group consisting of a hydrogen atom, C to C alkyl, C to C alkenyl, C to C alkynyl, C to C substituted alkyl, C to C substituted alkenyl, C to C₁₂ substituted alkynyl, C to C acyl, C to C₁₂ substituted acyl, C to C cycloalkyl, C to C substituted cycloalkyl, C to C cycloalkenyl, C to C substituted cycloalkenyl, a heterocyclic ring, substituted heterocyclic ring, heteroaryl, substituted heteroaryl, C to C phenylalkyl, C to C substituted phenylalkyl, C to C heterocycloalkyl, C to C₁₂ substituted heterocycloalkyl, C to C phenylalkoxy, C to C₁₂ substituted phenylalkoxy, phenyl, 10 substituted phenyl, naphthyl, substituted naphthyl, cyclic C to C alkylene, substituted cyclic C to C heteroalkylene, substituted cyclic C to C heteroalkylene, carboxy, protected carboxy, 15 hydroxymethyl and protected hydroxymethyl; and m and n are, independently, 0, 1, 2, 3 or 4; 20 and

R and R are, independently, selected from the group consisting of a functionalized resin, a hydrogen atom, C to C alkyl, C to C substituted alkyl, phenyl, substituted phenyl, heterocycle, substituted heterocycle,

5 C to C cycloalkyl, C to C substituted cycloalkyl, C to C cycloalkenyl, C to C substituted cycloalkenyl, C to C alkenyl, C to C substituted alkenyl, C to C phenylalkyl, C to C substituted phenylalkyl, C to C heterocycloalkyl and C to C substituted

10 heterocycloalkyl, C to C acyl, C to C substituted acyl, phenylsulfonyl, substituted phenylsulfonyl, C to C alkylsulfonyl, C to C substituted alkylsulfonyl, C to C alkylaminocarbonyl, C to C substituted alkylaminocarbonyl, phenylaminocarbonyl, substituted phenylaminocarbonyl, C to C alkylaminothiocarbonyl, C to C substituted alkylaminothiocarbonyl, phenylaminothiocarbonyl and substituted phenylaminothiocarbonyl;

provided that, where R' is methylene, at least one of R to R must be the formula -C(O)NR'R'; or

provided that, where R' is methylene, at least one of R to R must be the formula -C(O)R', wherein R' is a heterocyclic ring or substituted heterocyclic ring, wherein said ring contains at least one nitrogen atom and

25 wherein said nitrogen atom is attached to the carbonyl carbon; or

a pharmaceutically acceptable salt of a compound thereof.

17. The single compound of claim 16, wherein:

R¹, R², R³ and R⁴ are, independently, selected from the group consisting of a hydrogen atom, halo, C₁ to C₁₂ alkyl, C₁ to C₁₂ substituted alkyl, carboxy, and the group consisting of (i) the formula -C(O)NR¹¹R¹² and (ii) the formula -C(O)R¹³, wherein R¹¹ and R¹² are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₁₂ alkyl, C₁ to C₁₂ substituted alkyl, C₁ to C₁₂ alkenyl, C₁ to C₁₂ substituted alkenyl, C₁ to C₁₂ phenylalkyl, C₁ to C₁₂ substituted phenylalkyl, C₁ to C₁₂ heterocycloalkyl, C₁ to C₁₂ substituted heterocycloalkyl, heteroaryl, substituted heteroaryl, heterocycle and substituted heterocycle.

18. The single compound of claim 16, wherein:

R¹, R², and R³ are each a hydrogen atom and R⁴ is selected from the group consisting of halo, C₁ to C₁₂ alkyl, C₁ to C₁₂ substituted alkyl, carboxy, and the group consisting of (i) the formula -C(O)NR¹¹R¹² and (ii) the formula -C(O)R¹³, wherein R¹¹ and R¹² are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₁₂ alkyl, C₁ to C₁₂ substituted alkyl, C₁ to C₁₂ alkenyl, C₁ to C₁₂ substituted alkenyl, C₁ to C₁₂ phenylalkyl, C₁ to C₁₂ substituted phenylalkyl, C₁ to C₁₂ heterocycloalkyl, C₁ to C₁₂ substituted heterocycloalkyl, heteroaryl, substituted heteroaryl, heterocycle and substituted heterocycle.

19. The single compound of claim 16, wherein:

R is selected from the group consisting of a hydrogen atom, C₁ to C₁₂ alkyl, C₁ to C₁₂ substituted alkyl, phenyl, substituted phenyl, C₁ to C₁₂ phenylalkyl, C₁ to C₁₂

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substituted phenylalkyl, C₁ to C₆ heterocycloalkyl, C₁ to C₆ substituted heterocycloalkyl, heterocycle, substituted heterocycle, C₁ to C₆ cycloalkyl and C₁ to C₆ substituted cycloalkyl.

5 20. The single compound of claim 16, wherein:

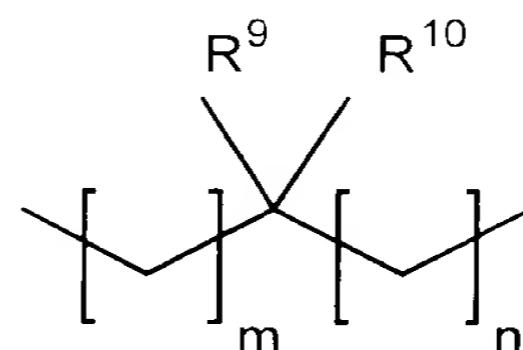
R' is the formula:

-D-W-E-

wherein:

10 W is absent or selected from the group consisting of phenylene, substituted phenylene, C₁ to C₆ cycloalkylene and C₁ to C₆ substituted cycloalkylene; and

15 D, which is directly attached to the nitrogen depicted in the formula, and E, which can be absent, are, independently, selected from the group consisting of C₁ to C₆ alkylene, C₁ to C₆ substituted alkylene, -NH- and the formula:



wherein:

20 R' and R are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₆ alkyl, C₁ to C₆ substituted

alkyl, C₁ to C₄ cycloalkyl, C₁ to C₄ substituted cycloalkyl, C₁ to C₄ phenylalkyl, C₁ to C₄ substituted phenylalkyl, phenyl, substituted phenyl; and m and n are, independently, 0, 1 or 2.

21. The single compound of claim 16, wherein:

R¹ and R² are each a hydrogen atom.

22. The single compound of claim 16, wherein:

R¹, R², R³ and R⁴ are, independently, selected from the group consisting of a hydrogen atom, halo, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, carboxy, and the group consisting of (i) the formula -C(O)NR¹R² and (ii) the formula -C(O)R³, wherein R³ and R⁴ are, independently, selected from the group consisting of a hydrogen atom, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, C₁ to C₄ alkenyl, C₁ to C₄ substituted alkenyl, C₁ to C₄ phenylalkyl, C₁ to C₄ substituted phenylalkyl, C₁ to C₄ heterocycloalkyl, C₁ to C₄ substituted heterocycloalkyl, 15 heteroaryl, substituted heteroaryl, heterocycle and 20 substituted heterocycle;

R⁵ is selected from the group consisting of a hydrogen atom, C₁ to C₄ alkyl, C₁ to C₄ substituted alkyl, phenyl, substituted phenyl, C₁ to C₄ phenylalkyl, C₁ to C₄ substituted phenylalkyl, C₁ to C₄ heterocycloalkyl, C₁ to 25 C₄ substituted heterocycloalkyl, heterocycle, substituted heterocycle, C₁ to C₄ cycloalkyl and C₁ to C₄ substituted cycloalkyl;

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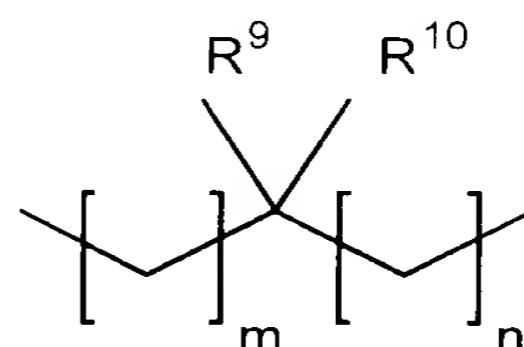
R' is the formula:

-D-W-E-

wherein:

5 W is absent or selected from the group
consisting of phenylene, substituted phenylene,
C₂ to C₆ cycloalkylene and C₂ to C₆ substituted
cycloalkylene; and

10 D, which is directly attached to the nitrogen
depicted in the formula, and E, which can be
absent, are, independently, selected from the
group consisting of C₂ to C₆ alkylene, C₂ to C₆
substituted alkylene, -NH- and the formula:



wherein:

15 R' and R¹ are, independently, selected
from the group consisting of a hydrogen
atom, C₁ to C₆ alkyl, C₁ to C₆ substituted
alkyl, C₂ to C₆ cycloalkyl, C₂ to C₆
substituted cycloalkyl, C₂ to C₆
phenylalkyl, C₂ to C₆ substituted
phenylalkyl, phenyl, substituted phenyl;
and m and n are independently 0, 1 or 2;
and

R and R are each a hydrogen atom.

23. The single compound of claim 16, wherein R' is methylene, R, R and R' are each a hydrogen atom and R' is the formula -C(O)NR'R'.

5 24. The single compound of claim 16, wherein R' is methylene, R, R and R' are each a hydrogen atom and R' is the formula -C(O)R', wherein R' is a heterocyclic ring or substituted heterocyclic ring, wherein said ring contains at least one nitrogen atom and wherein said nitrogen atom 10 is attached to the carbonyl carbon.

25. The single compound of claim 16, wherein R' is not methylene.

26. The single compound of claim 16, wherein:

R, R and R' are each a hydrogen atom and R' is the
15 formula -C(O)NR'R', wherein wherein R' is selected from the group consisting of a hydrogen atom, methyl, ethyl and benzyl and R' is selected from the group consisting of a hydrogen atom, benzyl, 4-methoxyphenyl, 4-phenoxyphenyl, (1-ethyl-2-pyrrolidino)methyl, 20 pyridin-2-ylmethyl, 2-(pyridin-2-yl)ethyl, methyl, 3,3,5-trimethylcyclohexyl, cyclohexyl, 3-(trifluoromethyl)benzyl, 6-indazolyl, 2-(ethoxycarbonyl)ethyl, ethoxycarbonylmethyl, cyclooctyl, cyclopropyl, (N,N-diethylamino)ethyl, 25 3-(2-oxo-1-pyrrolidino)propyl, (1-ethyl-2-pyrrolidinyl)methyl, pyridin-4-ylmethyl, 3-(4-morpholino)propyl, 4-methylphenyl, butyl and 2-thiazolyl;

R is selected from the group consisting of
3-phenoxyphenyl, 3-hydroxy-4-methoxyphenyl,
4-acetamidophenyl, 4-phenoxyphenyl, 4-bromo-2-thienyl,
4-pyridyl, 2-butyl, 4-chloro-3-nitrophenyl,
5 3-nitrophenyl, 2,3-dichlorophenyl, 2,5-difluorophenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
2-phenyl-4-imidazolyl, 5-nitro-2-furyl, 4-bromophenyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
10 3-hydroxyphenyl, 3,4-difluorophenyl,
4-dimethylaminophenyl, 2-thienyl, 4-cyanophenyl,
3-cyanophenyl, 4-nitrophenyl, 2-fluorophenyl,
4-carboxyphenyl, 2-bromophenyl,
2-chloro-3,4-dimethoxyphenyl, 3-thienyl, 4-quinolyl,
15 4-methyl-5-imidazolyl, 4-hydroxyphenyl,
2-ethyl-5-formyl-4-methylimidazolyl,
4-chloro-2-nitrophenyl, 3-pyridyl,
3,4-dimethyl-6-nitrophenyl, 5-chloro-2-nitrophenyl and
2-nitrophenyl;
20 R' is selected from the group consisting of
methylmethylen, ethylene, propylene, pentylène,
isobutylmethylen, 3-aminocarbonylpropylmethylen,
2-methylthioethylmethylen, isopropylmethylen,
phenylmethylen, benzylmethylen,
25 cyclohexylmethylen, 4-chlorobenzylmethylen,
indol-3-ylmethylen,
4-trifluoroacetamidobutylmethylen,
3-guanidopropylmethylen, -CH CH NH- and
1-cyclohexylene-4-NH-; and
30 R and R' are each a hydrogen atom.

27. The single compound of claim 10, wherein:

R, R and R are each a hydrogen atom and R is the formula -C(O)R, wherein R is selected from the group consisting of

5 1,3,3-trimethyl-6-aza-6-bicyclo(3,2,1)octyl,
4-(4-fluorophenyl)-1-piperazino, 4-acetyl-1-piperazino,
morpholino, 2-methyl-4-(3-methylphenyl)-1-piperazino,
4-ethoxycarbonylpiperidino and N-methylhomopiperazino;

R is selected from the group consisting of

10 3-phenoxyphenyl, 3-hydroxy-4-methoxyphenyl,
4-acetamidophenyl, 4-phenoxyphenyl, 4-bromo-2-thienyl,
4-pyridyl, 2-butyl, 4-chloro-3-nitrophenyl,
3-nitrophenyl, 2,3-dichlorophenyl, 2,5-difluorophenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
15 2-phenyl-4-imidazolyl, 5-nitro-2-furyl, 4-bromophenyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,
4-dimethylaminophenyl, 2-thienyl, 4-cyanophenyl,
20 3-cyanophenyl, 4-nitrophenyl, 2-fluorophenyl,
4-carboxyphenyl, 2-bromophenyl,
2-chloro-3,4-dimethoxyphenyl, 3-thienyl, 4-quinolyl,
4-methyl-5-imidazolyl, 4-hydroxyphenyl,
2-ethyl-5-formyl-4-methylimidazolyl,
25 4-chloro-2-nitrophenyl, 3-pyridyl,
3,4-dimethyl-6-nitrophenyl, 5-chloro-2-nitrophenyl and
2-nitrophenyl;

R' is selected from the group consisting of

methylenemethylene, ethylene, propylene, pentylene,
30 isobutylmethylenemethylene, 3-aminocarbonylpropylmethylenemethylene,

2-methylthioethylmethylen, isopropylmethylen, phenylmethylen, benzylmethylen, cyclohexylmethylen, 4-chlorobenzylmethylen, indol-3-ylmethylen, 5 4-trifluoroacetamidobutylmethylen, 3-guanidopropylmethylen, -CH CH NH- and 1-cyclohexylene-4-NH-; and

R and R' are each a hydrogen atom.

28. The single compound of claim 16, wherein:

10 R, R and R' are each a hydrogen atom and R' is the formula -C(O)NR''R', wherein R'' is selected from the group consisting of a hydrogen atom, methyl, ethyl and benzyl and R' is selected from the group consisting of a hydrogen atom, 2-(2-methoxyphenyl)ethyl, 15 (1-ethyl-2-pyrrolidino)methyl, pyridin-2-ymethyl, 2-methyl-5-chlorophenyl, (2-(pyridin-2-yl)ethyl), 1-ethyl-2-pyrrolidinylmethyl, 3,3,5-trimethylcyclohexyl, 3,4-methylenedioxophenyl, 3-(trifluoromethyl)benzyl, pyridin-4-ylmethyl, 20 6-indazolyl, 2-(ethoxylcarbonyl)ethyl, cyclooctyl, cyclopropyl, benzyl, N,N-(diethylamino)ethyl, 3-(2-oxo-1-pyrrolidine)propyl, 3-(4-morpholino)propyl, (ethoxylcarbonyl)methyl and cyclohexyl;

R is selected from the group consisting of phenoxyphenyl, 25 4-hydroxy-3-methoxyphenyl, 3,4,5-trimethoxyphenyl, 3-hydroxy-4-methoxyphenyl, 4-acetamidophenyl, 4-phenoxyphenyl, 4-methoxyl-1-naphthyl, 4-bromo-2-thienyl, 4-pyridyl, isopropyl, 2-methylthioethyl, 4-chloro-3-nitrophenyl, 3-nitrophenyl, 30 4-t-butylphenyl, 2,3-dichlorophenyl,

3,5-bis(trifluoromethyl)phenyl, 2,5-difluorophenyl,
2-quinolyl, 2-chloro-3,4-dimethoxyphenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,
2-phenyl-4-imidazolyl, 2-(ethoxycarbonyl)cyclopropyl,
5 5-nitro-2-furyl, 4-bromophenyl, cyclopropyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,
4-dimethylaminophenyl, 4-methylthiophenyl,
10 4-(trifluoromethyl)phenyl, 2-thienyl,
2,3-dimethoxyphenyl, 3-ethoxy-4-hydroxyphenyl,
4-cyanophenyl, 3-cyanophenyl, 2-furyl, 4-nitrophenyl,
1-naphthyl, 2-methoxyphenyl, 4-isopropylphenyl, piperonyl,
2-fluorophenyl, 4-ethoxyphenyl and 2,4-dihydroxyphenyl;

15 R^o is selected from the group consisting of methylene,
ethyldene, ethylene, propylene, pentylene,
isopentylidene, 3-aminocarbonylbutylidene,
2-methylthiopropylidene, isobutylidene, phenylmethylen,
benzylmethylen, cyclohexylethylidene,
20 4-chlorobenzylmethylen,
indol-3-ylethylidene, 4-trifluoroacetamidopentylidene,
3-guanidobutylidene, hydroxyethylidene,
2-aminocarbonylpropylidene, isopentylidene,
mercaptoethylidene, 4-hydroxybenzylmethylen,
25 1,3-phenylene, 1,4-phenylene, 1,4-(phenylene)-NH-,
3,6-dioxaoctylene-NH-, -CH CH NH- and
1,4-(cyclohexylene)-NH-;

and

R and R^o are each a hydrogen atom.

29. The single compound of claim 16, wherein:

R¹, R² and R³ are each a hydrogen atom and R⁴ is the formula -C(O)R⁵, wherein R⁵ is selected from the group consisting of

5 1,3,3-trimethyl-6-aza-6-bicyclo(3,2,1)octyl,
4-(4-fluorophenyl)-1-piperazino, 4-acetyl-1-piperazino,
piperazino, 2-methyl-4-(3-methylphenyl)-1-piperazino,
4-(ethoxycarbonyl)piperidino, N-methylhomopiperazino and
N,N'-diisopropylimidamino;

10 R is selected from the group consisting of phenoxyphenyl,
4-hydroxy-3-methoxyphenyl, 3,4,5-trimethoxyphenyl,
3-hydroxy-4-methoxyphenyl, 4-acetamidophenyl,
4-phenoxyphenyl, 4-methoxyl-1-naphthyl,
4-bromo-2-thienyl, 4-pyridyl, isopropyl,

15 2-methylthioethyl, 4-chloro-3-nitrophenyl, 3-nitrophenyl,
4-t-butylphenyl, 2,3-dichlorophenyl,
3,5-bis(trifluoromethyl)phenyl, 2,5-difluorophenyl,
2-quinolyl, 2-chloro-3,4-dimethoxyphenyl,
5-methyl-2-furyl, 4-chloro-3-fluorophenyl,

20 2-phenyl-4-imidazolyl, 2-(ethoxycarbonyl)cyclopropyl,
5-nitro-2-furyl, 4-bromophenyl, cyclopropyl,
2-norbornen-5-yl, 6-nitropiperonyl,
2-chloro-5-nitrophenyl, 5-hydroxy-2-nitrophenyl,
3-hydroxyphenyl, 3,4-difluorophenyl,

25 4-dimethylaminophenyl, 4-methylthiophenyl,
4-(trifluoromethyl)phenyl, 2-thienyl,
2,3-dimethoxyphenyl, 3-ethoxy-4-hydroxyphenyl,
4-cyanophenyl, 3-cyanophenyl, 2-furyl, 4-nitrophenyl,
1-naphthyl, 2-methoxyphenyl, 4-isopropylphenyl, piperonyl,

30 2-fluorophenyl, 4-ethoxyphenyl and 2,4-dihydroxyphenyl;

R' is selected from the group consisting of methylene, ethyldene, ethylene, propylene, pentylene, isopentylidene, 3-aminocarbonylbutylidene, 2-methylthiopropylidene, isobutylidene, phenylmethylen, 5 benzylmethylen, cyclohexylethylidene, 4-chlorobenzylmethylen, indol-3-ylethylidene, 4-trifluoroacetamidopentylidene, 3-guanidobutylidene, hydroxyethylidene, 2-aminocarbonylpropylidene, isopentylidene, 10 mercaptoethylidene, 4-hydroxybenzylmethylen, 1,3-phenylene, 1,4-phenylene, 1,4-(phenylene)-NH-, 3,6-dioxaoctylene-NH-, -CH₂CH₂NH- and 1,4-(cyclohexylene)-NH-;

and

15 R' and R" are each a hydrogen atom.

30. The single compound of claim 16, wherein

R', R¹, R⁴, R⁷ and R" are each a hydrogen atom;

R' is the formula -C(O)NR¹¹R¹², wherein R¹¹ is a hydrogen atom and R¹² is selected from the group consisting of 20 pyridin-2-ylmethyl and 3,3,5-trimethylcyclohexyl;

R' is selected from the group consisting of 4-N,N-dimethylaminophenyl, 5-chloro-2-nitrophenyl, 4-bromo-2-thienyl, 2-butyl, 5-nitro-2-furyl, 4-bromophenyl, 2-thienyl, 3-thienyl, 3-cyanophenyl, 25 4-cyanophenyl, 4-quinolyl and 4-hydroxyphenyl; and

R' is methylene.

31. A method of preparing a benzimidazole derivative compound, comprising:

(a) coupling a first compound having a substituent of the formula -NH-C(O)-variable group-NH with a benzene 5 compound that is substituted with a nitro group and a halo group in an ortho relationship on the benzene ring, the benzene compound optionally substituted with a variable group at one or more of the remaining 4 positions of the benzene ring, resulting in a benzene 10 compound substituted with a nitro group and a monosubstituted amino group in an ortho relationship on the benzene ring;

(b) reducing the nitro group of the benzene compound resulting from step (a); and

15 (c) coupling the compound resulting from step (b) with an aldehyde compound, resulting in a benzimidazole derivative compound.

32. The method of claim 31, wherein said first compound is attached to solid support.

20 33. The method of claim 31, wherein said variable group on said benzene compound in step (a) is a carboxyl.

34. The method of claim 33, wherein said carboxyl group is coupled with a monosubstituted amine compound, a disubstituted amine compound, a cyclic imino compound or 25 an alcohol compound.